

WHAT IS CLAIMED IS:

1. A multiple-compartment container for dispensing flowable products by gravity comprising at least a first compartment, a second compartment and a multiple-dispensing tap comprising at least a first and second inlet, a hollow body defining a first and second outlet and a first and second channel wherein the first compartment is linked to the first inlet and the second compartment is linked to the second inlet of the dispensing tap.
2. A multiple-compartment container according to Claim 1 wherein the container comprises more than two compartments and the dispensing tap comprises more than two channels.
3. A multiple-compartment container according to Claim 1 wherein the container's form is selected from the group consisting of substantially rigid, flexible and malleable, malleable bag, malleable sachet, malleable pouch, and combinations thereof.
4. A multiple-compartment container according to Claim 3 wherein the bag, sachet or pouch is supported in a second substantially rigid container.
5. A multiple-compartment container according to Claim 1 made from plastic.
6. A multiple-compartment container according to Claim 1 wherein the multiple-dispensing tap is pressure operated.
7. A multiple-compartment container according to Claim 1 wherein the container comprises a gripping means.
8. A dual compartment container according to Claim 7 wherein the gripping means is a handle or a surface of the container designed to facilitate gripping.
9. A multiple-compartment container according to Claim 1 comprising at least two vent holes suitable for venting each of the compartments.
10. A multiple-compartment container according to Claim 9 comprising a sealable cover over the vent holes.

11. A multiple-compartment container according to Claim 10 wherein the cover is non-removable.
12. A multiple-compartment container according to Claim 1 wherein the first compartment is equal to or larger in size than the second compartment.
13. A multiple-compartment container according to Claim 1 wherein the first and second compartments comprise the same volume of different flowable products which are preferably allowed to mix at the outlets.
14. A multiple-compartment container according to Claim 1 wherein the flowable products are dispensed from the first and second compartments substantially simultaneously.
15. A multiple-compartment container according to Claim 1 wherein the flowable products are dispensed from each compartment at a constant volume ratio.
16. A multiple-compartment container according to Claim 1 wherein the ratio of dispensing of the flowable product in the first compartment to the dispensing of the flowable product in the second compartment is 1:1 to 10:1.
17. A dual compartment container according to Claim 16 wherein the ratio is from 3:1 to 5:1.
18. A multiple-compartment container according to Claim 1 wherein the flowable product in the first compartment is a conventional non bleach-containing detergent and the flowable product in the second compartment comprises a bleach.
19. A dual compartment container for dispensing two or more flowable products by gravity at constant volume ratio, comprising a first compartment and a second compartment each comprising a flowable product A and B respectively, the compartments being designed to satisfy the equation

$$Q_A = \alpha Q_B$$

where,

$$Q_A = \frac{\pi R_A^3}{4\mu_A} \left[ \frac{\rho_A g R_A (H_A)}{2L_A} \right] \text{ and } Q_B = \frac{\pi R_B^3}{4\mu_B} \left[ \frac{\rho_B g R_B (H_B)}{2L_B} - \frac{4\tau_{oB}}{3} \right]$$

Product A is a Newtonian fluid and product B a Bingham fluid and wherein:

Q is the flow rate of products A and B respectively;

$\alpha$  is the volume ratio;

R is the radius of each tap channel;

L is the length of each tap channel;

H is the liquid head of A and B respectively in each compartment;

g is gravity;

$\tau$  is yield stress; and,

$\mu$  is the viscosity.

20. A dual compartment container according to Claim 19 wherein  $\alpha$  is from 1 to 10.
21. A dual compartment container according to Claim 19 wherein  $\alpha$  is 4.
22. A multiple-dispensing tap suitable for attachment to a container comprising a first and second inlet, a hollow body defining a first and second outlet, a valve system for controlling flowable product through the outlet, a means for operating the valve system, and the hollow body comprises at least two channels capable of substantially simultaneously dispensing two different flowable products.
23. A dual dispensing tap according to Claim 22 wherein the valve system is pressure or rotationally operated.
24. A multiple-dispensing tap according to Claim 22 that is a pressure operated tap.
25. A multiple-dispensing tap according to Claim 22 wherein the valve system comprises a valve element and valve stem which connects the valve element to the means of operating the valve system.
26. A multiple-dispensing tap according to Claim 22 wherein the means for operating the valve system is a push button made from a deformable diaphragm.

27. A multiple-dispensing tap according to Claim 26 wherein the deformable diaphragm is bleach stable.
28. A multiple-dispensing tap according to Claim 25 wherein the valve element is frustoconical.
29. A multiple-dispensing tap according to Claim 25 wherein the valve element or outlet additionally comprises a seal.
30. A multiple-dispensing tap according to Claim 25 wherein the valve stem is capable of movement in a guide means mounted in the body.